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ABSTRACT

Much research has examined how individuals cope with work and life stress. Findings have suggested that stress, generally measured as major life events or daily hassles, may be less important to both physical and psychological well-being than are other individual appraisal and coping processes. This study was conducted to examine the effects of coping style and cognitive hardiness on physical and psychological health status. Measures of coping style (intrusive positive thoughts, intrusive negative thoughts, avoidance, problem-focused coping), cognitive hardiness, stress, health habits, psychological distress, and physical illness were collected for 194 professional employees. Multiple regression analyses revealed that intrusive negative thoughts and avoidance coping approaches significantly contributed to predictions of psychological distress and physical illness outcomes, respectively. Cognitive hardiness significantly contributed to predictions of psychological distress but not physical illness outcomes. Health habits were significantly related to both measures of health status. Two coping approaches, intrusive positive thoughts and problem-focused coping did not significantly contribute to predictions of either physical or psychological health status. (Author/NB)

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COPING STYLE, COGNITIVE HARDINESS, & HEALTH STATUS

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ABSTRACT

This study investigates the effects of coping style and cognitive hardiness on physical and psychological health status. Measures of coping style (intrusive positive thoughts, intrusive negative thoughts, avoidance, problem-focused coping), cognitive hardiness, stress, health habits, psychological distress, and physical illness were collected for 194 professional employees. Multiple regression analyses revealed that intrusive negative thoughts and avoidance coping approaches significantly contributed to predictions of psychological distress and physical illness outcomes, respectively. Cognitive hardiness significantly contributed to predictions of psychological distress but not physical illness outcomes. Health habits were significantly related to both measures of health status. Two coping approaches, intrusive positive thoughts and problem-focused coping did not significantly contribute to predictions of either physical or psychological health status.

INTRODUCTION

Over the last several years, there has been a tremendous explosion of research into how individuals cope with work and life stress. This research has occurred in light of the consistent, albeit modest, correlations found between measures of stress and health status (Rabkin & Struening, 1976; Johnson & Sarason, 1979). These findings suggest that stress, generally measured as major life events or daily hassles, may be less important to both physical and psychological well-being than other individual appraisal and coping processes (e.g., Antonovosky, 1979; Lazarus, 1981; Cobb, 1976; Lefcourt, 1980; Kobasa, 1979; Belloc & Breslow, 1972; Matthews & Haynes, 1986).

Although the areas of appraisal and coping processes are rather complex, there is a striking congruence in much of the literature. This congruence is based on two basic orientations toward coping with stressful work and life events, approach and avoidance (Roth & Cohen, 1986). Both approach and avoidance refer to cognitive, emotional, and behavioral activity that is oriented either toward, or away from perceived harm, threat, or challenge. Recently, coping has received focused attention as a possible moderator of the relationship between stress and illness (cf., Andreasen & Morris, 1972; Cohen & Lazarus 1973; Zales, 1985; Averill & Rosen, 1972). The presence or absence of specific approach and avoidance coping strategies has been related to a variety of health outcomes (e.g., Jemmott & Locke, 1984; Manne & Sandler, 1984; Horowitz, 1976; Zilberg, Weiss, & Hilberg, 1982; Lazarus, 1983).

Few investigators would disagree that there are, most likely, multiple factors affecting how individuals cope with work and life stress including personality characteristics, situational or role demands, cognitive appraisal, genetic constitution, and even cultural practices. The relative importance of these individual factors strongly affects both the conceptualization of specific coping strategies and its specific measurement.

Current measures of coping strategies include standardized instruments, interviewing protocols or observational techniques that assess the use of cognitive, affective, and behavioral coping approaches. The measurement of coping has generally been divided into two diverse areas: 1) Recovery from traumatic live events; or 2) Anticipation of future stressful events. Although there are differences between these two, recovery and anticipation are not mutually exclusive from each other. For example, dealing with a major life crisis involves confronting the event itself, as well as its affect on the future. As a result, a proliferation of measurement tools has emerged to assess the use of cognitive, behavioral, and affective coping strategies in response to specific life events or anticipation of future stresses (e.g., Folkman & Lazarus, 1980, 1985; Pearlin & Schooner, 1978; Billings & Moos, 1980; Kaloupek, White, & Wong, 1984; Zilerg et al., 1982). In general, there is little agreement as to the conceptualization and measurement of coping strategies in the health psychology literature.

In this study, the conceptualization of coping is based on the schema first proposed by Lazarus and his colleagues in which coping is viewed as a response to perceived stress, resulting in the development of the Ways of Coping Checklist (Folkman et al., 1980). This measure assesses two major dimensions, problem-focused coping (i.e., the management of the source of stress) and emotion-focused coping (i.e., the regulation of emotions) around a single serious life event or stressor. As such, the Ways of Coping Checklist may be conceptualized as a state measure capturing individual coping processes around specific stressful life events. Recent revisions of this scale have resulted in the delineation of specific scales that appear to be predictive of both physical and psychological health status (Aldwin & Revenson, 1987; Vitaliano, Maiuro, Russo, & Becker, 1987).

It might be argued that this "state approach" to assessing coping (i.e., measures that focus on a current serious life event) may actually be reflective of individual coping preferences in

response to specific work and life stressors. It would appear that development of coping scales that attempt to assess generalized coping strategies without reference to specific approaches used in the context of a particular stressor would have also have some value in light of recent findings that support the consistency of individual coping styles over time and across diverse life situations (e.g., Mullen & Suls, 1982; Cohen & Roth, 1984; Averill & Rosen, 1972). Although there is evidence that in some situations people have a strong preference for either avoidance or approach responses, it is likely to be true that the use of avoidance and approach coping strategies are not mutually exclusive (Roth et al., 1986). Obviously, more research is required to clarify the question of individual consistency of coping responses over time and situations.

One advantage of using a trait measure of coping is that it allows the researcher to compare situational-specific coping responses with more generic behavioral tendencies. Secondly, it is possible to differentiate specific coping approaches with an individual's overall coping effort (i.e., to determine the relative importance of one type of coping strategy over another). Still another advantage of a trait coping measure is that it uses both idiographic norms (by making the subject his/her own frame of reference) as well as nomothetic norms (by comparing relative coping strategies used across subjects).

Such an approach is not inconsistent with the theoretical arguments for the use of ipsative measures in the transactional approach to stress and coping by Coyne & Lazarus (1979) although they might argue that the study of coping processes should be conceptualized as dynamic forces and not relatively static structures as proposed here. In any event, both measurement approaches appear to have merit for additional investigation. Most likely, neither approach to the conceptualization and measurement of coping is completely accurate in describing complex transactional behavior in the face of work and life stress.

The coping measure developed in this study was theoretically derived based upon the Ways Of Coping Checklist (Folkman et al., 1980). It provides four conceptually distinct coping strategies along the approach and avoidance domains. The four coping styles measured include: (1) Intrusive positive thoughts (i.e., positive admonitions and self-talk); (2) Intrusive negative thoughts (i.e., self-blame, criticism, perfectionistic tendencies, catastrophic/irrational thinking); (3) Avoidance (i.e., minimization of the significance of a stressor; not dwelling on a stressor); and (4) Problem-focused coping (i.e., behavioral attempts to change environmental stressors or his/her own behavior).

A conceptually distinct individual coping variable that has been shown to have direct effects on the stress-illness relationship is the meta-construct of hardiness (Kobasa, 1979). According to Kobasa (1979), the hardiness meta-construct represents a constellation of three relatively stable appraisals which function as a buffer in the encounter of work and life stress. These three cognitive appraisals are described as: 1) A view of commitment rather than alienation towards work and life; 2) A view of personal control (internal) over individual outcomes; and 3) A view of life change as a challenge rather than a threat.

In a number of studies, Kobasa and her colleagues (cf. Kobasa, 1979; Kobasa, Maddi, Kahn, 1982; Kobasa Maddi, and Zola, 1983; Kobasa, Maddi, and Courington, 1981) showed that individuals possessing hardy appraisals of work and life remain physically healthier, particularly when experiencing a great deal of life change stress. Although potentially a promising variable, a number of criticisms of surrounding the hardiness literature have been recently discussed (cf., Hull, Treuren, & Virnelli, 1987; Nowack, 1986).

These criticisms tend to focus on: 1) How hardiness is measured; 2) Whether hardiness should be treated as a unitary phenomena associated with commitment, challenge, and control; 3) Whether hardiness predicts both psychological and physical health status; and 4) Whether

hardiness has direct or indirect effects on health. Partly in response to these criticisms and partly as a result of encouragement from other researchers (e.g., Hull et al., 1987) to explore alternative measures of hardiness that will not obscure the independent contribution of its subcomponents, a new scale was developed based on the personality hardiness literature. This brief, yet comprehensive cognitive hardiness measure was developed particularly for this study containing items assessing 1) Commitment towards work, family, community, and life; 2) Affective, emotional, and behavioral self-control; and 3) Optimistic views of change, challenge, and threat.

The purpose of this study was to explore the relationship between stress, coping, and psychological and physical health status. Coping was assessed by the Coping Style Scale, Cognitive Hardiness Scale, and a measure of health habits. It was hypothesized that both cognitive hardiness, coping style, and health habits would significantly contribute to predictions of health status. Consistent with previous research, it was expected that intrusive negative thoughts would be positively correlated with health status and that intrusive positive thoughts, problem-focused coping, cognitive hardiness, and avoidance would be negatively correlated with health status. Additionally, it was expected that the practice of daily health habits would be negatively correlated with both psychological and physical health status.

METHOD

Participants and Procedures

Questionnaires were distributed to 262 professional employees attending management training workshops over a six-month period in a variety of organizations in the Los Angeles

area. Respondents were sent a cover letter explaining the purpose of the pilot testing, assuring them of confidentiality, and requesting their participation. Respondents were also told that they could receive confidential written feedback regarding their results. A total of 194 questionnaires were returned for a response rate of 74%.

The mean age of the employee sample was 35.6 years. This professional adult sample appears to be relatively young, gender balanced (58 percent male and 42 per cent female), well educated (62 per cent possess at least a two year college degree), and racially diverse (67% Caucasian, 10% Black, 10% Hispanic, 12% Asian, and 1% other).

Measures

Independent Measures

Three coping related scales were developed for this particular study, the Coping Style Inventory, the Cognitive Hardiness scale, and the Health Habits scale. All were theoretically derived and based on the current health psychology literature.

Coping style was assessed by the twenty-item Coping Style Scale which was developed to appraise four types of coping responses: intrusive positive thoughts, intrusive negative thoughts, avoidance, and problem-focused coping. This coping style scale is answered on a five-point scale assessing frequency of use of particular coping behaviors (e.g., "never," "rarely," "sometimes," "often," "always").

Scale construction took place following a combination of factor analytic and rational procedures designed to eliminate weak or redundant items (item-scale r had to be >.25 and <.50 to be retained), to maximize representation of different aspects of coping of each scale, and to produce relatively independent coping scales. These procedures resulted in a five-item Intrusive Positive Thoughts scale with a coefficient alpha of .67; a five-item Intrusive Negative Thoughts scale with a coefficient alpha of .72; a five-item Avoidance scale with a coefficient alpha of .68; and a five-item Problem-Focused scale with a coefficient alpha of .67.

Characteristic items for the Coping Style Scale included: Intrusive Positive Thoughts--"Say and think positive things to myself to make me feel better about it;" Intrusive Negative Thoughts--"Blame and criticize myself for creating or causing my problem;" Avoidance--"Avoid thinking about it when it crosses my mind;" and Problem-Focused coping--"Change something in my own behavior or environment to minimize or alleviate my dissatisfaction."

The Cognitive Hardiness scale was constructed similarly, and assesses the possession of specific attitudes and beliefs based upon the concept of personality hardiness (Kobasa, 1979). This scale has its roots in the work of Lefcourt & Rotter (1980), Phares (1976), and Antonovosky (1979). Recent criticisms of the original hardiness scale by Kobasa (cf. Hull, et al., 1987; Nowack, 1987) have also been considered in the development of the present scale. The present scale is composed of attitudes and beliefs about work and life including: (1) Involvement--commitment, as opposed to alienation, to one's work, family, self, hobbies; (2) Challenge--attitudes around viewing life changes as challenges as opposed to threats; (3) Control--beliefs that one has a sense of control over significant outcomes in life.

Respondents are asked to rate how strongly they agree with specific statements about their beliefs on a 1-5 scale ("strongly agree," "agree," "neither agree nor disagree," "disagree,"

"strongly disagree"). A sample item is: "My involvement in non-work activities and hobbies provides me with a sense of meaning and purpose." This scale has shown a high internal consistency reliability (alpha) of .83 and a test re-test reliability of .86 over a three month period.

The Cognitive Hardiness scale has also shown convergent validity with the original Kobasa hardiness scale in one unpublished study with police officers (N=239). The Pearson correlation coefficients for the Cognitive Hardiness scale with the overall Kobasa scale, and commitment, challenge, and control scales were .43, .40, .02, and .50, respectively, all p's < .001.

Health habits were measured by a 25-item scale assessing the daily practice of specific behaviors hypothesized to be conducive to both physical and psychological well-being. These health habits include level of exercise, rest and sleep, preventative hygiene practices, and nutrition and eating habits. Respondents are asked to rate how frequently they practice these specific health habits on a 1-5 scale (e.g., "never," "rarely," "sometimes," "often," "always").

This scale is conceptually based on earlier research on preventative health behaviors including Harris and Guten (1979), Belloc and Breslow (1972), Wiley and Camacho (1980), Williams and Wechsler (1972), and Pardine et al. (1982). High scores on the health habits scale suggest the practice of health habits on a daily basis. This scale has shown moderately high internal consistency reliability (alpha) of .80. Some characteristic items include: "Exercised for at least 30 minutes, three times a week, to enhance muscle tone, strength, or flexibility (e.g., stretching, weight lifting, calisthenics, isometrics, etc.)" and "Missed an entire night or large proportion of an entire night of sleep because of work or play activities."

Stress was measured using a six-item scale based on the Hassles Scale (Kanner, Coyne, Schaefer, and Lazarus, 1981). This scale lists six categories of minor irritants of daily living including the areas of work, family, friends, the environment, practical considerations, and chance occurrences. This scale has demonstrated adequate test re-test reliability (.67) over a four-month period. The original Hassles Scale has been found to account for more variance to a variety of psychological and health outcomes than the life events approaches to stress management (Kanner et al., 1981; Monroe, 1983).

Dependent Measures

Psychological distress was assessed by an adapted version of the Hopkins Symptom Checklist (HSCL; Derogatis, Lipman, Rickels, Uhlenhuth, and Covi, 1974). This measure has shown a moderately high internal consistency (Cronbach's alpha of .86), test, re-test reliability (.75 over a six-month period), and growing construct and criterion-related validities with normal adult samples (Derogatis et al., 1974). The HSCL consists of 58-items and has been repeatedly factored into five distinct dimensions including anxiety, depression, somatic-complaints, interpersonal sensitivity, and compulsive thoughts. A global psychological distress score was calculated for the present study.

Physical illness was adapted by a measure developed by Greenberg (1981). This eight-item scale asked respondents to endorse frequency specific categories of illness or symptoms of illness. These illness categories included: 1) Injuries/accidents; 2) Infection (bacterial or viral); 3) Respiratory; 4) Gastro-intestinal; 5) Neurological; 6) Cardiovascular; 7) Change in existing medical condition; and 8) Miscellaneous physical symptomatology. This eight-item scale is answered on a five-point continuum (e.g., "no times", "one time", "two times", "three times", "four or more times") over a three-month period. This scale has shown moderately high internal consistency reliability (alpha) of .73. of .73.

RESULTS

To determine the interrelationships among the research variables, Pearson product-moment correlations were computed. Table 1 summarizes these intercorrelations.

Insert Table 1 about Here

Significant, albeit modest, correlations were found between the four coping styles (intrusive positive thoughts, intrusive negative thoughts, avoidance, and problem-focused coping) and the cognitive hardiness scale (r's= .42, -.44, .40, .32, respectively, all p's < .01). The direction and strength of these correlations provides some evidence of construct validity for the Coping Style scale.

Some overlap between the four coping style scales was also apparent. Significant correlations were observed between positive intrusive thoughts and avoidance (r= .55, $p < .01$) and problem-focused coping (r= .41, $p < .01$). A significant correlation was also observed between the avoidance and problem-focused coping scale (r= .28, $P < .01$).

Coping, Psychological Distress, and Physical Illness

Table 2 presents the results of two separate step-wise multiple regression analyses using stress, cognitive hardiness, coping style, and health habits as predictors of psychological distress and physical illness outcomes. This permitted an examination of the incremental variance attributed to these independent variables on the two physical and psychological health status measures.

Insert Table 2 about Here

Cognitive hardiness, health habits, stress, and intrusive negative thoughts all significantly contributed to predictions of psychological distress outcomes. Together, these independent variables accounted for approximately .60 of the variance in this dependent variable. No other coping style scales significantly contributed to predictions of psychological distress in this regression analysis.

Health habits, stress, and avoidance all significantly contributed to predictions of physical illness outcomes. Together, these independent variables accounted for approximately .34 of the variance in this dependent variable. Avoidance incrementally added to the prediction of physical illness (R^2 =.06; $F(1, 193)=15.2$, $p < .01$). No other coping style scale significantly contributed to physical illness in this regression analysis.

DISCUSSION

The results of this study tend to support a positive association between stress, coping, and health status. It must be emphasized that these findings rely exclusively on self-report data and measurement tools that lack established criterion-related validity beyond the present study. However, it must also be emphasized that these are early studies underscoring the viability of assessing specific cognitions and behaviors that potentially moderate the stress-illness relationship.

Only two coping style scales significantly contributed to physical and psychological health status in the regression analyses. Specifically, intrusive negative thoughts significantly

contributed to predictions of psychological distress, and avoidance to predictions of physical illness. Individuals who reported using a greater level of intrusive negative thoughts as a general way of coping with both work and life stress, reported significantly higher levels of overall psychological distress. In subsequent analysis of the data, the intrusive negative thoughts scale was found to be significantly correlated with the depression (r=.52, $P < .01$), anxiety (r=.34, $P < .01$), somatic complaints (r=.35, $P < .01$), and impulsivity (r=.47, $p < .01$) subscales of the psychological distress measure (Hopkins Symptom Checklist) used in this study. These findings appear to be supportive of previous research suggesting that negative self-talk is generally associated with symptoms of psychological distress, and strongly related to anxiety and depression (e.g., Beck, 1979; Meichenbaum & Turk, 1976; Ellis, 1974).

The contribution of avoidance to the prediction of physical illness in the present study suggests that individuals who minimized the significance of aversive cognitions related to work and life stress, reported less physical illness than those who tended to dwell on what was bothering them. It might be argued that individuals with the propensity to utilize cognitive avoidance strategies might be better able to buffer the impact of short-term stress on physical health status.

Some support for the beneficial aspects of avoidance strategies comes from the work of Mullen & Suls (1982). They found a consistent pattern across a large number of studies where avoidance strategies were found to be particularly effective when health outcomes measures were immediate, or short-term. However, they found that approach (attention) strategies were more effective when health outcome measures were long-term. Additional evidence reviewed by Lazarus (1983) is also consistent with the notion that avoidance strategies might be most beneficial in a limited time frame and might actually be dysfunctional later on. Thus, avoidance strategies might be a valuable form of coping primarily during the initial period

when emotional resources and behavioral options are rather limited.

Additionally, there is strong evidence to support the hypothesis that avoidance may be particularly more effective than approach strategies if the work and life situation is uncontrollable (Roth & Cohen, 1986; Lazarus, 1983). These researchers conclude that coping effectiveness depends on the controllability of the situation. It would appear obvious that symptoms and illnesses such as diabetes, high blood pressure, and high blood serum cholesterol levels require vigilance and attention for proper treatment and lifestyle modification. Use of avoidance strategies here, might literally lead to exacerbation of the disease process itself, or even death. With other illnesses and personal trauma, such as congenital heart disease or robbery, there is no apparent advantage of approach coping strategies, whereas avoidance may actually serve to reduce personal anxiety and depression.

Although avoidance would appear to have some short-term health benefit based on the findings of this study, it was not possible to determine whether this coping style might actually be detrimental in some manner. In general, it would appear that when there is no possibility of changing aversive situations or utilizing approach strategies, avoidance can directly moderate the effect of stress on physical well-being (Roth & Cohen, 1987). Clearly, additional research is required to further clarify and explore the potential benefits and liabilities of avoidance approaches in dealing with stressful work and life events.

Neither positive intrusive thoughts, nor problem-focused coping contributed significantly to predictions of health status in this study. Although intrusive positive thoughts was significantly, albeit slightly, correlated with physical illness ($r = -.17$, $p < .01$), this particular coping style did not incrementally account for any of the variance in this dependent variable. It is possible that positive self-talk plays a less critical role in the buffering of stress on

short-term health status. Alternatively, intrusive positive thoughts may contribute to specific health status outcomes not included in the present study (e.g., psychological well-being, job burnout).

The lack of a relationship between the problem-focused coping scale and health status might suggest that a propensity to modify one's environment and/or own behavior may not directly buffer the impact of stress on physical and psychological symptomatology. However, subsequent analysis between problem-focused coping and the Hopkins Symptom Checklist subscales revealed significant, albeit slight, correlations with depression ($r = -.18$, $P < .01$) and interpersonal sensitivity ($r = -.14$, $p < .05$). Perhaps, measurement of specific problem-focused behaviors (e.g., preventative health habits), rather than the "trait-oriented" approach used here, may help clarify the role of problem-focused coping in the stress-illness relationship. It is recommended that additional research should focus on specific instrumental problem-focused coping behaviors associated with daily work and life events.

In the present study, health habits did significantly contribute to predictions of both physical and psychological health. With respect to physical illness, health habits entered the regression first, accounting for .23 of the variance in this dependent variable. These findings suggest that behavioral health coping strategies may play an important and direct role in the stress-illness relationship. This finding is consistent with previous research that has shown that short and long-term health status are influenced by many health behaviors under an individual's own control (cf., Belloc, 1973; Wiley & Comacho, 1980). Additional research should focus on the relationship between specific coping styles and the practice of health habits under diverse situations. Such research should help delineate aspects of successful lifestyle modification programs as well relapse prevention strategies.

The Cognitive Hardiness scale was found to significantly contribute to prediction of psychological distress but not physical illness in this study. This finding is consistent with prior research (Nowack, 1986) extending the role of cognitive hardiness with health outcomes other than physical illness. It would appear that conceptually, the sense of commitment, control, and challenge underlying the cognitive hardiness measure developed for this study, are important cognitions that appear to buffer the impact of daily work and life stress on well-being. Additional research should focus on the potentially additive, or interactive, effects of specific coping styles and this cognitive hardiness scale.

In general, this study provides limited criterion-related validity between diverse coping measures and health status with a professional working adult sample. Replication of this study is necessary with diverse samples (e.g., students, elderly) to strengthen the generalizability of the findings. Additional research is required to strengthen the psychometric properties of these promising coping measures (Coping Style, Cognitive Hardiness, & Health Habits scales) as well as to determine the relative effectiveness of specific coping styles to diverse psychological and physical health outcomes.

It is an obvious understatement to mention that coping with stress is a highly dynamic process. The basic approach and avoidance strategies measured here can certainly vary in primacy across time for an individual, and both of these basic conceptualizations of coping with stress may even exist together. An individual may have a consistent preference for one coping strategy over another, even if it is clearly dysfunctional. As such, the study of coping is exceedingly complex and challenging. However, the approach to the measurement of coping proposed here would appear to be useful for assessing individual tendencies across major or minor life events. Further study is clearly required to clarify the merits and utility of this particular approach to the conceptualization and measurement of coping behavior.

REFERENCES

Aldwin, C. M. and Revenson, T.A. (1987). Journal of Personality and Social Psychology, 53, 337-348.

Andreasen, N. and Morris, A. (1972). Long term adjustment and adaption mechanisms in severely burned adults. Journal of Nervous Mental Disorders, 154, 352-362.

Antonovosky, A. (1979). Health, stress, and coping. San Francisco: Jossey Bass.

Averill, J. and Rosen, M. (1972). Vigilant and nonvigilant coping strategies and psychophysiological reactions during the anticipation of electrical shock. Journal of Personality and Social Psychology, 23, 128-141.

Beck, A. (1979). Cognitive therapy of depression. New York: Guilford Press.

Belloc, N. (1973). Relationship of health practices and mortality. Preventative Medicine, 2, 67-81.

Belloc, N. and Breslow, L. (1972). Relationship of physical health status and health practices. Preventative Medicine, 1, 409-421.

Billings, A. and Moss, R. (1981). The role of coping responses and social resources in attenuating the stress of life events. Journal of Behavioral Medicine, 4, 139-157.

Cobb, S. (1976). Social support as a moderator of life stress. Psychosomatic Medicine, 38, 300-314.

Cohen, F. and Lazarus, R. (1973). Active coping processes, coping dispositions, and recovery from surgery. Psychosomatic Medicine,35, 375-389.

Coyne, J. and Lazarus, R. (1979). The ipsative-normative framework for the longitudinal study of stress. Paper presented at the Annual American Psychological Association, New York.

Derogatis, L., Lipman, R., Rickels, K., Uhnlenhuth, E., and Covi, L. (1974). The Hopkins Symptom Checklist: A self-report symptoms inventory. Behavioral Science, 19, 1-14.

Ellis, A. (1974). Humanistic Psychotherapy. New York: McGraw Hill.

Folkman, S. and Lazarus, R. (1980). An analysis of coping in a middle-aged community sample. Journal of Health and Social Behavior, 21, 219-239.

Greenberg, J. (1981). A study of stressors in college students. Health Education, 12, 8-12.

Harris, D. and Guten, S. (1979). Health-protective behavior: An exploratory study. Journal of Health and Social Behavior, 20, 17-29.

Horowitz, M. (9176). Stress response syndromes. New York: Aronson.

Hull, J., Van Treuren, R., and Virnelli, S. (1987). Journal of Personality and Social Psychology, 53, 518-530.

Jemmott, J. and Locke, S. (1984). Psychosocial factors, immunologic mediation and human susceptibility to infectious diseases: How much do we know? Psychological Bulletin, 95, 78-108.

Johnson, J. and Sarason, I. (1979). Moderator variables in life stress research. In. I. Sarason and C. Spielberger (Eds.), Stress and Anxiety. New York: Hemisphere Publishing.

Kanner, A., Coyne, J., Schafer, C., and Lazarus, R. (1981). Comparison of two modes of stress measurement: Daily hassles and uplifts versus major life events. Journal of Behavioral Medicine, 4, 1-39.

Kaloupek, D., White, H., and Wong, M. (1984). Multiple assessment of coping strategies used by volunteer blood donors. Journal of Behavioral Medicine, 7, 35-60.

Kobasa, S.C. (1979). Stressful life events, personality, and health: An inquiry into hardiness. Journal of Personality and Social Psychology, 37, 1-11.

Kobasa, S. C., Maddi, S.R., and Courington, S. (1981). Personality and constitution as mediators in the stress-illness relationship. Journal of Health and Social Behavior, 22, 368-378.

Kobasa, S.C., Maddi, S.R., and Zola, M.D. (1983). Type A and hardiness. Journal of Behavioral Medicine, 6, 41-51.

Kobasa, S.C., Maddi, S.R., and Kahn, S. (1982). Hardiness and health: A prospective study. Journal of Behavioral Medicine, 6, 41-51.

Lazarus, R. (1981). The stress and coping paradigm. In C. Eisdorfer, D. Cohen, A. Kleinman, and P. Maxim (Eds.), Theoretical Bases for Psychopathology. New York: Spectrum.

Lazarus, R. (1983). The costs and benefits of denial. In S. Breznitz (Ed.), The Denial of Stress (pp 1-30). New York: International Universities Press.

Lefcourt, H. (1980). Locus of control and coping with life events. In E. Staub (Ed.), Personality: Basic Issues and Current Research. New Jersey: Prentice Hall.

Manne, S. and Sandler, I. (1984). Coping and adjustment to genital herpes. Journal of Behavioral Medicine, 7, 391-410.

Matthews, K. and Haynes, S. (1986). Type A behavior pattern and coronary heart disease: Update and critical evaluation. American Journal of Epidemiology, 123, 923-960.

Meichenbaum, D. and Turk, D. (1976). The cognitive-behavioral management of anxiety, anger and pain. In P. Davidson (Ed.), The Behavioral Management of Anxiety, Depression, and Pain. New York: Brunnel/Mazel Press.

Monroe, S. (1983). Major and minor life events as predictors of psychological distress: Further issues and findings. Journal of Behavioral Medicine, 6, 189-205.

Mullen, B. and Suls, J. (1972). The effectiveness of attention and rejection as coping styles. Journal of Psychosomatic Research, 26, 43-49.

Nowack, K. (1986). Type A, hardiness, and psychological distress. Journal of Behavioral Medicine, 9, 537-548.

Pardine, P., Dytell, R., Napoli, A., Friedman, A., & Spencer, S. (1982). The direct and indirect effects of stress on illness. Paper presented at the Annual convention of the American Psychological Association, Washington, D.C.

Pearlin, L. I. and Schooler, C. (1977). The structure of coping. Journal of Health and Social Behavior, 35, 167-171.

Phares, E. J. (1976). Locus of control in personality. New Jersey: General Learning Press.

Rabkin, J. C., and Strueining, E. L. (1976). Life events, stress, and illness. Science, 194, 1013-1020.

Roth, S. & Cohen, L. (1986). Approach, avoidance, and coping with stress. American Psychologist, 41, 813-819.

Wiley, J. and Camacho, T. (1980). Lifestyle and future health: Evidence from the Alameda County Study. Preventative Medicine, 9, 1-21.

Williams, A. and Wechsler, H. (1972). Interrelatedness of preventative actions in health and other areas. Health Services Reports, 87, 969-976.

Vitaliano, P., Maiuro, R., Russo, J., and Becker, J. (1987). Raw versus relative scores in the assessment of coping strategies. Journal of Behavioral Medicine, 10, 1-18.

Zilerg, N., Weiss, D., and Horowitz, M. (1982). Impact of event scale: A cross-validation study and some empirical evidence supporting a conceptual model of stress response syndromes. Journal of Consulting and Clinical Psychology, 50, 407-414.

Table 1

Intercorrelations of the SAP Scales
(N = 194)

Scale	1	2	3	4	5	6	7	8	9
1. Stress		-.48*	-.46*	-.18*	.35*	-.26*	.01	.46*	.58*
2. Health Habits			.33*	.06	-.28*	.04	.18*	-.47*	-.58*
3. Cognitive Hardiness				.42*	-.44*	.40*	.32*	-.36*	-.36*
4. Intrusive Thoughts (+)					.04	.55*	.41*	-.17*	-.09
5. Intrusive Thoughts (-)						-.09	.05	.22*	.51*
6. Avoidance							.22*	-.28*	-.23*
7. Problem-Focused Coping								-.07	-.07
8. Physical Illness									.54*
9. Psychological Distress									

* $p < .01$

Table 2

Results of Multiple Regression Analysis with Psychological Distress and Physical Illness as the Dependent Variables (N=194)

Variables	Psychological Distress			
	Multiple R	RSQ	RSQ Change	F
Cognitive Hardiness	.58	.33	.33	86.6*
Health Habits	.71	.51	.17	58.5*
Stress	.75	.55	.05	19.4*
Intrusive Negative Thoughts	.78	.60	.04	19.0*

Variables	Physical Illness			
	Multiple R	RSQ	RSQ Change	F
Health Habits	.48	.23	.23	48.4*
Stress	.53	.28	.06	14.1*
Avoidance	.59	.34	.06	15.2*

* $p < .01$